

## CLAIMS

1. A master cylinder for a hydraulic disc brake comprising:  
a housing defining a cylinder, the cylinder having a first and second end along its axis;  
5 a piston received in the cylinder, the piston having a radial seal between the piston and cylinder;  
a lever pivotably associated with the housing for pivoting between a rest position and an actuated position relative to the housing;  
a push rod operatively associated with the piston and the lever to move the piston  
10 axially within the cylinder as the lever is actuated between the rest and actuated position;  
a threaded engagement between a first end of the push rod and the lever, the threaded engagement being configured to cause movement of the rest position of the lever relative to the housing when a rotating force is applied to the push rod causing axial rotation of the push rod;  
15 a first set of protrusions operatively associated with the push rod to rotate axially with the push rod;  
a second set of protrusions nesting with the first set of protrusions, the second set of protrusions being fixed against rotation relative to the push rod when the rotating force is applied to the push rod; and  
20 biasing means operatively associated with at least one of the first and second sets of protrusions to bias the protrusions into nesting engagement with the other inhibiting relative axial rotation therebetween.
2. The master cylinder of claim 1 wherein the first and second sets of  
25 protrusions are configured to have a plurality of nested engagement positions as the push rod is axially rotated relative to the housing, the rest position of the lever moving a select amount relative to the housing as the first set of protrusions is rotated relative to the second set of protrusions between adjacent nested engagement positions.

3. The master cylinder of claim 1 further comprising means operatively associated with the push rod for preventing movement of the piston relative to the cylinder as the rotating force is applied to the push rod.

5 4. The master cylinder of claim 1 wherein the first and second sets of protrusions extend radially.

5. The master cylinder of claim 4 further comprising a piston coupling enveloping a second end of the push rod and attached thereto to rotate with the push rod,  
10 the first set of protrusions being attached to an outer surface of the piston coupling.

6. The master cylinder of claim 5 further comprising an externally threaded insert threadably engaged with the caliper housing having an inner bore, the second set of protrusions extending radially inward from a surface of the inner bore and the piston  
15 coupling being received in the inner bore.

7. The master cylinder of claim 6 wherein the externally threaded insert further includes radially inclined gear teeth engaged with a worm, the worm preventing axial rotation of the threaded insert upon application of the rotation force to the push rod.  
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8. The master cylinder of claim 1 wherein the first and second sets of protrusions extend axially.

9. A master cylinder for a hydraulic disc brake comprising:  
a housing defining a cylinder, the cylinder having a first and second end along its  
axis;  
a piston received in the cylinder, the piston having a radial seal between the piston  
5 and cylinder;  
a lever pivotably associated with the housing for pivoting between a rest position  
and an actuated position relative to the housing;  
a push rod operatively associated with the piston and the lever to move the piston  
axially within the cylinder as the lever is actuated between the rest and actuated position;  
10 a threaded engagement between a first end of the push rod and the lever, the  
threaded engagement being configured to cause movement of the rest position of the lever  
relative to the housing when a rotating force is applied to the push rod causing axial  
rotation of the push rod; and  
indexing means operatively associated with the push rod for providing indexed  
15 axial rotation of the push rod upon application of the rotating force to the push rod causing  
axial rotation of the push rod.

10. The master cylinder of claim 9 wherein the indexing means prevents  
rotation of the push rod unless the rotating force applied to the push rod is greater than a  
20 select amount.

11. The master cylinder of claim 9 wherein the indexing means comprises a  
first set of protrusions operatively associated with the push rod and a second set of  
protrusions fixed against rotation relative to the push rod, the first and second protrusions  
25 being configured to have a plurality of nested engagement positions as the push rod is  
axially rotated relative to the housing, the nest position lever moving a select amount  
relative to the housing as the first set of protrusions is rotated relative to the second set of  
protrusions between adjacent nested positions.

12. The master cylinder of claim 9 further comprising means operatively associated with the push rod for preventing movement of the piston relative to the cylinder as the rotating force is applied to the push rod.